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EXAMINER

POPHAM, JEFFREY D

ART UNIT PAPER NUMBER

2137

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/911,042

Applicant(s)

OKAUE, TAKUMI

Examiner

Jeffrey D. Popham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Remarks

Claims 1-24 are pending.

Response to Arguments

1. Applicant's arguments, see Pages 1-5, filed 6/6/2005, with respect to the rejection(s) of claim(s) 1-24 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made with Harada (U.S. Patent 6,850,914) in view of Fujii (U.S. Patent 6,128,263) and Dondeti (U.S. Patent 6,240,188).

Claim Objections

2. Claims 3, 6, 11, and 20 are objected to because of the following informalities:

- Claim 3, lines 13-14 recites the limitation "the other authenticating key previously stored in said virtual memory device". There is insufficient antecedent basis for this limitation in the claims. For purposes of prior art rejection, it has been construed as "another authenticating key previously stored in the memory device".
- Claim 6, at the beginning of line 3 should read "a key tree structure...".
- Claim 11, line 11 recites the limitation "said memory device". There is insufficient antecedent basis for this limitation in the claim. For

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purposes of prior art rejection, it has been construed as "a memory device".

- Claim 20, line 5 states "the virtual memory is" which should be "the virtual memory device is".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 8, 9, 12-14, 20, 21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada (U.S. Patent 6,850,914) in view of Fujii (U.S. Patent 6,128,263).

Regarding Claim 1,

Harada discloses a data processing apparatus for executing reproduction of data from a memory device or for recording of data into a memory device on condition that a mutual authentication between the data processing apparatus and the memory device is established comprising:

A structure executing the mutual authentication with the memory device (Column 8, lines 12-27; and Column 10, lines 31-54); and

A structure executing the reproduction of data from the memory device or the recording of data into the memory device on condition that mutual authentication between the data processing apparatus and the memory device is established (Column 5, lines 5-15);

But does not disclose the use of a virtual memory device within the data processing apparatus that is used to authenticate with the data processing apparatus when the memory device cannot function to execute the mutual authentication.

Fujii, however, discloses a virtual memory device and a structure executing the mutual authentication with the virtual memory device when the memory device cannot function to execute the mutual authentication (Column 15, lines 39-48). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the external storage device of Fujii into the recording system of Harada in order to allow for increased security when the memory device is a read only memory, such as a DVD or CD.

Regarding Claim 8,

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Claim 8 is a method claim that is broader than apparatus claim 1 and is rejected for the same reasons.

Regarding Claim 12,

Claim 12 is a program providing medium claim that is broader than apparatus claim 1 and is rejected for the same reasons.

Regarding Claim 13,

Claim 13 is an apparatus claim that is broader than apparatus claim 1 and is rejected for the same reasons.

Regarding Claim 20,

Claim 20 is a method claim that is broader than apparatus claim 1 and is rejected for the same reasons.

Regarding Claim 24,

Claim 24 is a computer-readable medium claim that is broader than apparatus claim 1 and is rejected for the same reasons.

Regarding Claim 2,

Harada discloses a structure executing the mutual authentication with the memory device when the mutual authentication is available by initially checking whether the memory device is capable of executing the mutual authentication or not (Column 9, lines 1-20).

Regarding Claim 9,

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Claim 9 is a method claim that is broader than apparatus claim 2 and is rejected for the same reasons.

Regarding Claim 14,

Claim 14 is an apparatus claim that is broader than apparatus claim 2 and is rejected for the same reasons.

Regarding Claim 21,

Claim 21 is a method claim that is broader than apparatus claim 2 and is rejected for the same reasons.

4. Claims 3-7, 10, 15-19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada in view of Fujii, further in view of Dondeti (U.S. Patent 6,240,188).

Regarding Claim 3,

Dondeti discloses a key for authenticating distribution of an enabling key block, the key having been previously enciphered by such enabling key block containing enciphering data for enciphering renewal keys on paths constituting a hierarchical key tree structure comprising a variety of keys disposed in correspondence with tree roots, nodes, and leaves on paths ranging from roots to leaves of the key tree structure, the tree structure corresponding to a plurality of data processing apparatuses as own leaves, the enciphering data further comprising upper-rank keys in the tree hierarchy which are to be

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enciphered by lower-rank keys (Column 3, line 48 to Column 4, line 21). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the hierarchical key tree structure of Dondeti into the recording system of Harada as modified by Fujii in order to make the system scalable to allow for the addition and modification of many processing apparatuses.

Harada discloses that the mutual authentication executed between the data processing apparatus and the memory device is executed by applying the distributed key and another authenticating key previously stored in the memory device (Column 8, lines 12-27; and Column 10, lines 31-54).

Regarding Claim 10,

Claim 10 is a method claim that is broader than apparatus claim 3 and is rejected for the same reasons.

Regarding Claim 15,

Claim 15 is an apparatus claim that is broader than apparatus claim 3 and is rejected for the same reasons.

Regarding Claim 22,

Claim 22 is a method claim that is broader than apparatus claim 3 and is rejected for the same reasons.

Regarding Claim 4,

Dondeti discloses that only a proper data processing apparatus is enabled to decode the enabling key block, whereas an

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improper data processing apparatus is unable to decode the enabling key block in a plurality of data processing apparatuses jointly constituting leaves of the key tree structure (Column 3, line 48 to Column 4, line 21).

Harada discloses the use of licensing to determine which data processing apparatuses are proper and which are not (Column 5, lines 15-67); and also discloses the data processing apparatus preventing such data processing apparatus devoid of a proper license from illegally implementing mutual authentication with the memory device by revoking the improper data processing apparatus (Column 5, lines 15-67).

Regarding Claim 16,

Claim 16 is an apparatus claim that is broader than apparatus claim 4 and is rejected for the same reasons.

Regarding Claim 5,

Dondeti discloses means for subjecting the enabling key block distribution authenticating key enciphered and presented by the enabling key block to a version controlling process by way of executing a process for renewing individual versions (Column 1, lines 30-46; and Column 3, line 48 to Column 4, line 21).

Regarding Claim 17,

Claim 17 is an apparatus claim that is broader than apparatus claim 5 and is rejected for the same reasons.

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Regarding Claim 6,

Dondeti discloses a key tree structure comprising a variety of keys disposed in correspondence with roots, nodes, and leaves on paths ranging from roots to leaves of the key tree structure, a plurality of data processing apparatuses being associated with the tree as own leaves (Column 3, line 48 to Column 4, line 21),

Means for enciphering leaf-keys provided in correspondence with own leaves with a storage key proper to individual ones of the data processing apparatuses and then storing in a memory means inside of the corresponding data processing apparatus (Column 3, line 48 to Column 4, line 21).

Regarding Claim 18,

Claim 18 is an apparatus claim that is broader than apparatus claim 6 and is rejected for the same reasons.

Regarding Claim 7,

Dondeti discloses a key tree structure comprising a variety of keys disposed in correspondence with roots, nodes, and leaves on paths ranging from roots to leaves of the key tree structure, there being a plurality of data processing apparatuses corresponding to own leaves, based on leaf-keys provided in correspondence with own leaves (Column 3, line 48 to Column 4, line 21),

A device key block stored in memory within the processing apparatus, the key block being an assemblage of ciphered keys

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comprising mutually different individually enciphered node keys of plural steps ranging from own leaves up to upper-rank keys of the key tree structure (Column 3, line 48 to Column 4, line 21).

Regarding Claim 19,

Claim 19 is an apparatus claim that is broader than apparatus claim 7 and is rejected for the same reasons.

Regarding Claim 11,

Harada discloses a license system for providing a data processing system with a proper license control, comprising:

Means for executing a process for reproducing data from a memory device or recording data into the memory device conditioned on whether a mutual authentication is actually effectuated between the data processing apparatus and the memory device (Column 5, lines 5-15; Column 8, lines 12-27; and Column 10, lines 31-54); and

Means for enabling only a properly licensed data processing apparatus to properly obtain the authenticating key among a plurality of data processing apparatuses and means for preventing such a data processing apparatus devoid of a proper license from illegally from illegally effectuating authentication with the memory device to further prevent the improper data processing apparatus from illegally utilizing contents data (Column 5, lines 15-67; Column 8, lines 12-27; and Column 10, lines 31-54).

Fujii discloses a virtual memory device and means for executing mutual authentication between the data processing device and the virtual memory device when the memory device is devoid of a function to execute mutual authentication with the data processing apparatus (Column 15, lines 39-48).

Dondeti discloses means for providing an enabling key block distribution authenticating key previously enciphered by an enabling key block containing data for enciphering renewal keys on paths constituting a key tree structure comprising a variety of keys disposed in correspondence with root, nodes, and leaves on a path ranging from roots to leaves of the key tree structure, a plurality of data processing apparatuses corresponding to own leaves, the enabling key block also comprising data for enciphering upper-rank keys via lower-rank keys (Column 3, line 48 to Column 4, line 21); and

Means for enabling only a proper data processing apparatus to decode the enabling key block, whereas an improper data processing apparatus is unable to decode the enabling key block in a plurality of data processing apparatus jointly constituting leaves of the key tree structure (Column 3, line 48 to Column 4, line 21).

Regarding Claim 23,

Claim 23 is a system claim that is broader than system claim 11 and is rejected for the same reasons.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey D. Popham whose telephone number is (571)-272-7215. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571)272-3865. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Matthew R. Smithers
MATTHEW SMITHERS
PRIMARY EXAMINER
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